

### **ABSTRACT OF THE DISCLOSURE**

A method for determining the severity of brain function impairment in a person due to an insult to the brain such as mild traumatic brain injury, aging or intoxication is disclosed including the steps of determining a processing time value of the person in accordance with an  
5 elapsed time between a stimulus applied to the person and a response to the stimulus provided by the person, wherein the processing time value is representative of the impaired brain function. Electrical signals are provided in accordance with the processing time value, whereby the electrical signals are representative of the impaired brain function. Mathematical operations are performed upon the electrical signals to provide a processing time index. The severity of  
10 brain function impairment is determined in accordance with the processing time index. The severity of a concussion or brain impairment can be determined quantitatively in accordance with the processing time index.